



**IDEM**  
**Office of Air Management**  
**Rules Guidance**

**January 1998**

**EXISTING HOSPITAL/ MEDICAL/INFECTIOUS WASTE  
INCINERATORS**  
**#97-16(APCB)**

**FACT SHEET**

**Overview**

This rulemaking adds emission standards for incinerator units whose primary purpose is combustion of hospital waste and/or medical/infectious waste for which construction was commenced on or before June 20, 1996.

medical waste incinerator category is one of the larger sources of dioxin emissions in the United States. In addition, many medical waste incinerators are located in residential areas. Therefore, reductions will occur in densely populated urban areas.

**Citations Affected**

Adds: 326 IAC 11-6

Cement kilns, pyrolysis units, incinerators that burn less than 10% medical/infectious and hospital waste, and certain types of wastes are exempt from this rule. EPA may consider regulating these under separate rulemaking.

**Affected Persons**

This rule affects existing Hospital/Medical/Infectious Waste Incinerators that commenced construction on or before June 20, 1996. There are approximately 100 affected facilities in Indiana. This rule has the potential to positively affect citizens residing near these facilities which are located throughout the state. By setting emission limits for the pollutants listed, this rule will serve to improve the air quality in Indiana.

On February 27, 1995, U.S. EPA published a proposed rule establishing New Source Performance Standards (standards) for Hospital/Medical/Infectious Waste Incinerators (medical incinerators) and emission guidelines (guidelines) for existing medical incinerators (60 FR 10654). Supplemental information regarding the standards and guidelines was published on June 20, 1996 (60 FR 31736), which is now considered a re-proposal. Final standards and guidelines were published on September 15, 1997 (60 FR 48348). The standards apply to new incineration units for which construction commenced after June 20, 1996, while the guidelines apply to existing incinerator units for which construction commenced on or before June 20, 1996.

**Potential Cost**

It is expected that many facilities which currently operate onsite incinerators will switch to less expensive methods of treatment and disposal when faced with the compliance costs associated with the emission guidelines. U.S. EPA estimates operating costs for controls ranging from \$150,000 to \$300,000 per year for each facility.

Federal law requires states to adopt both the standards for new medical incinerators and requirements consistent with the guidelines for existing medical incinerators. This rulemaking applies to existing medical incinerators and is being initiated to establish emission guidelines consistent with those of U.S. EPA's final rule promulgated on September 15, 1997 (60 FR 48348). This rule will provide the legal mechanism to implement the guidelines and will be part of the state plan IDEM develops as required by Sections 111(d) and 129 of the Clean Air Act Amendments. IDEM will incorporate the standards for new medical incinerators as part of a

**Description**

This rule incorporates federal emission requirements for incinerators located in hospitals, laboratories and other facilities that burn hospital, medical, or infectious waste. The rule will result in significant reductions in the emissions of many hazardous air pollutants from these incinerators. Emissions of dioxin, a pollutant of particular concern because it is persistent in the environment and bioaccumulates, will be reduced by 95-97%. The

separate rulemaking.

The rule establishes emission limits for particulate matter (PM), opacity, sulfur dioxide (SO<sub>2</sub>), hydrogen chloride (HCl), oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), lead (Pb), cadmium (Cd), mercury (Hg), dioxins and dibenzofurans (dioxins/furans), and fugitive ash emissions. The emission limits for cadmium for large sources were inadvertently omitted in the federal rule, though they are referenced throughout the preamble. Therefore, they have been included in section 4 of the state rules. EPA plans to publish a correction to this omission.

The emission limits are divided into three subcategories based on waste burning capacity: small ( $\leq 200$  lbs/hr), medium ( $> 200$  and  $\leq 500$  lbs/hr), and large ( $> 500$  lbs/hr). Waste burning capacity is determined by the maximum design capacity or the maximum charge rate established during the most recent performance test. The emission guidelines also contain alternative emission limits for small rural incinerators that are at least 50 miles from the nearest Standard Metropolitan Statistical Area (SMSA). IDEM's draft rule language does not include these alternative limits since Indiana does not have any areas that meet this criterion.

The standards also establish requirements for medical incinerator operator training and qualifications, waste management plans, testing and monitoring of pollutants and operating requirements. The waste management plan will identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. The plan must be submitted, along with the results of the initial performance test demonstrating compliance with the emission limits, 60 days following the initial performance test.

There are approximately 100 sources that will be affected by this rule located throughout the state. Some sources (noncommercial medical waste incinerators) may choose to shut down and use other waste disposal options, such as sending waste offsite to a commercial medical waste incinerator or using onsite alternative medical waste treatment technologies, such as autoclaving, chemical treatment, and microwave irradiation. Most medical waste incinerators that continue to operate will need to install add-on air pollution control devices to meet the emission limits.

Sources planning to install control devices are allowed time to come into compliance with the

rule as long as increments of progress are made according to the compliance schedule. An extension request is also available for sources not planning to retrofit but needing more time to switch to alternative waste treatment technologies.

The emission guidelines promulgated by U.S. EPA establish compliance dates based on when the state implementation plan is approved by U.S. EPA. However, the department has used the effective date of this rule as the basis for compliance dates in the draft rule language, as it gives more certainty to when compliance will be required. IDEM expects the state rule to be final and effective in early 1999.

Earlier in the process of this rulemaking, IDEM, in their outreach efforts, mailed to each of the affected sources a packet of information containing the Draft rule, Federal Register notices, IDEM Fact Sheet and an EPA Fact Sheet. A survey form was included requesting key information.

## **CONSIDERATION OF FACTORS OUTLINED IN INDIANA CODE**

### **13-14-8-4**

Indiana Code 13-14-8-4 requires that in adopting rules and establishing standards, the board shall take into account:

- 1) all existing physical conditions and the character of the area affected;
- 2) past, present, and probable future uses of the area, including the character of the uses of surrounding areas;
- 3) zoning classifications;
- 4) the nature of the existing air quality or existing water quality as the case may be;
- 5) technical feasibility, including the quality conditions that could be reasonably be achieved through coordinated control of all factors affecting the quality; and
- 6) economic reasonableness of measuring or reducing any particular type of pollution.

### **Consistency with Federal Requirements**

The new rules are consistent with federal guidance.

### **IDEM Contact**

Technical information regarding this action may be obtained from Susan Bem, Program Planning and Policy Section, Office of Air Management, (317) 233-5697 or (800) 451-6027 ext. 3-5697 (in Indiana). Additional information regarding this action may be obtained from Kiran Verma, Rules Development Section, Office of Air Management, (317) 233-5678 or (800) 451-6027 ext. 3-5678 (in Indiana).

### **Web Address**

Materials for this rule will be located at:  
<http://www.ai.org/idem/oam>

